Claims

What is claimed is:

1. A controlling system for controlling a reflectance of an electrochromic element, including:

an analog-to-digital converter reading an averaged voltage before the averaged voltage is applied on the electrochromic element, and then transforming said averaged voltage;

a microcontroller provided with at least a look up table and a PWM unit for providing a PWM function, receiving a input averaging voltage transformed from the analog-to-digital converter and then determining whether an output voltage with a fixed frequency in PWM signal form is relatively generated, by way of looking up several corresponding output voltages pre-stored in the look up table for the voltage of input signal and only judging whether the input averaged voltage is less than the pre-stored output voltage; and

a charging circuit capable of being disabled by the microcontroller to release overloading voltages in the electrochromic element when the input averaged voltage is in contrast of being less than the pre-stored output voltage.

2.The controlling system as described in claim 1 wherein the look up table is pre-set in a programmable memory located in the microcontroller.

3.The controlling system as described in claim 1 further including an amplifier for amplifying an output voltage with fixed frequency generated from PWM unit of the microcontroller.

4. The controlling system as described in claim 2 further including

an amplifier for amplifying an output voltage with fixed frequency generated from PWM unit of the microcontroller.

5. The controlling system as described in claim 4 wherein the output voltage is set low by microcontroller when the input averaged voltage is in contrast of being less than the pre-stored output voltage.

6. The controlling system as described in claim 1 or 5 wherein the electrochromic element is an electrochromic mirror with variable reflection rate.

7. A controlling method for controlling a reflectance of an electrochromic element, including the steps of:

a A/D converter reading an averaged voltage before the averaging voltage applied in the electrochromic element for transforming the averaged voltages;

looking up a corresponding output target voltage in the look up table that pre-stored several required output target voltages corresponding to a PWM averaged voltage from the A/D converter; and

only determining whether the input averaged voltage is less than the output target voltage to generate the PWM output voltage with a fixed frequency in PWM signal form by way of a PWM unit.

8. The controlling method as described in claim 5 further including the step of: setting the output voltage low when the input averaged voltage is in contrast of being less than the pre-stored output voltage.

9. The controlling method as described in claim 6 further including the step of: releasing overloading voltages in the electrochromic element by way of disabling a charging circuit when the input averaged voltage is in contrast of being less than the pre-stored output voltage.

10. A controlling circuit for controlling an electronic device, comprising:

an input signal providing an averaged voltage before the averaged voltage is applied on the electronic device;

a microcontroller provided with at least a look up table and a PWM unit for providing a PWM function, receiving the input averaging voltage and then determining whether an output voltage with a fixed frequency in PWM signal form is relatively generated, by way of looking up several corresponding output voltages pre-stored in the look up table for each input averaging voltage and only judging whether the input averaged voltage is less than the pre-stored output voltage; and

a driving circuit capable of being disabled by the microcontroller to release overloading voltages in the electronic device when the input averaged voltage is in contrast of being less than the pre-stored output voltage.

11. The controlling circuit as described in claim 10 wherein the input signal is an analog signal and processed by an analog-to-digital converter then transformed into a digital signal.

12. The controlling circuit as described in claim 11 wherein the electronic device is an electrochromic mirror used in automobile applications.

13. The controlling circuit as described in claim 12 wherein the electrochromic mirror is a liquid phase, self-erasing electrochromic mirror.

14. The controlling circuit as described in claim 13 wherein the driving circuit is a charging circuit capable of being disabled by the

microcontroller to release overloading voltages in the liquid phase, self-erasing electrochromic mirror.

15. The controlling circuit as described in claim 10 wherein the look up table is pre-set in a programmable memory located in the microcontroller.

16. The controlling circuit as described in claim 10 further including an amplifier for amplifying an output voltage with fixed frequency generated from PWM unit of the microcontroller.

17. The controlling system as described in claim 15 further including an amplifier for amplifying an output voltage with fixed frequency generated from PWM unit of the microcontroller.

18. The controlling system as described in claim 17 wherein the output voltage is set low by microcontroller when the input averaged voltage is in contrast of being less than the pre-stored output voltage.